

# Special Announcement



National Aeronautics and  
Space Administration

Goddard Space Flight Center  
Wallops Flight Facility  
Wallops Island, Virginia 23337

No. 05-01

Date: November 3, 2005

Subject: Results of Monitoring Lead in Drinking Water

Wallops Flight Facility operates public water systems regulated by the U.S. Environmental Protection Agency (EPA) and the Virginia Department of Health (VDH). These regulatory agencies require us to test tap water from various locations on the Main Base (20 sites) and Wallops Mainland/Island (10 sites) for lead and copper content.

In accordance with a VDH recommended testing plan, sites were evaluated at WFF during November and December 2003. The sites included U.S. Coast Guard (CG) Housing buildings 7C, 11C, 3M, and 8M, Marine Science Consortium (MSC) buildings B-13 and F-18, Navy buildings Q-29, R-20, and U-90, as well as NASA buildings D-4, E-2, E-104, E-107, F-1, F-3, F-4, F-10, F-16, F-20, F-160, M-15, U-25, U-30, U-55, U-70, V-50, W-65, X-15, X-55 and Y-55.

Of the 30 sites tested, twelve had lead levels that exceeded the regulatory limit of 15 parts per billion (ppb). These sites are: buildings CG-7C, CG-11C, D-4, E-107, F-10, F-16, F-20, and F-160 on the Main Base and U-55, U-70, V-50, and X-15 on Wallops Mainland/Island. Because samples from these locations exceeded the regulatory threshold, we are required to continue our lead education program and conduct further testing. Test results show that the lead is not in the wells supplying our drinking water, rather it is from corrosion of the distribution system. To reduce lead levels in drinking water, a program was initiated in 1997 to install filters on all WFF water fountains. When maintained properly, these filters have been shown to effectively remove 98.5 percent of lead in a drinking water sample. Also, corrosion control systems were installed in August 2005. Further lead reduction should occur approximately six months following initial operation of the systems.

We are required to provide the enclosed information to the consumers served by our water systems. This information is in the format required by the EPA regulation on lead and copper monitoring and portions of the information may not be directly applicable to our facility. It will help you to understand the risks and how to minimize your exposure. It also includes sources to contact for additional information. If you have any questions or concerns regarding this announcement, please contact the WFF waterworks at (757) 824-1191.

A handwritten signature in black ink, appearing to read "Caroline R. Massey".

Caroline R. Massey  
Assistant Director of Management Operations

Enclosure

## **LEAD (Pb) IN DRINKING WATER INFORMATIONAL NOTICE (November 2005)**

**SOME BUILDINGS ON THIS FACILITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER.**  
**LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH.**  
**PLEASE READ THIS NOTICE FOR FURTHER INFORMATION.**

### **Introduction**

The United States Environmental Protection Agency (EPA), the Virginia Department of Health (VDH), and the NASA Wallops Flight Facility (WFF) waterworks are concerned about lead in your drinking water. Although most homes and buildings have very low levels of lead in their drinking water, some locations at the Facility have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/l). Under Federal law WFF was required to have a program in place to minimize lead in your drinking water by August 2005. This program includes corrosion control treatment, source water treatment, and public education. WFF is also required to replace the portion of each service line that it owns if the line contributes lead concentrations of more than 15 ppb after the completion of the comprehensive treatment program. If you have any questions about how WFF is carrying out the requirements of the lead regulation, please call the waterworks at (757) 824-1191. This notice explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.

In accordance with a VDH recommended testing plan, several sites were evaluated at WFF during November and December 2003. The sites included Coast Guard (CG) Housing buildings 7C, 11C, 3M, and 8M, Marine Science Consortium (MSC) buildings B-13 and F-18, Navy buildings Q-29, R-20, and U-90, as well as NASA buildings D-4, E-2, E-104, E-107, F-1, F-3, F-4, F-10, F-16, F-20, F-160, M-15, U-25, U-30, U-55, U-70, V-50, W-65, X-15, X-55 and Y-55. Of the 30 sites tested, twelve had lead levels above the 15 ppb threshold. These sites are: buildings CG-7C, CG-11C, D-4, E-107, F-10, F-16, F-20, F-160, X-15, V-50, U-70 and U-55.

### **Health Effects of Lead**

Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery, porcelain, pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells, and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that will not hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination like dirt and dust that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

### **Lead in Drinking Water**

Lead in drinking water, although rarely the sole cause of lead poisoning can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and interior plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect your building to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes, and other plumbing materials to 8.0%.

When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or late in the afternoon, can contain fairly high levels of lead.

## STEPS YOU CAN TAKE TO REDUCE YOUR EXPOSURE TO LEAD IN DRINKING WATER

Despite our best efforts mentioned above to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home or building, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the end of this notice. For more information on having your water tested, please call the WFF waterworks at [\(757\) 824-1191](tel:7578241191).

If a water test indicates that the drinking water drawn from a tap in your home or building contains lead above 15 ppb, then you should take the following precautions:

1. Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home or building's plumbing, the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15-30 seconds. If your home or building has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home or building's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect you and your family's health. It usually uses less than one or two gallons of water and costs less than 30 cents per month based on flushing cold water taps twice a day. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash the dishes or water the plants. If you live or work in a multi-story building, letting the water flow before using it may not work to lessen your risk from lead. The plumbing systems have more and sometimes larger pipes than smaller buildings. Ask the WFF waterworks for help in locating the source of the lead and for advice on reducing the lead level.
2. Try not to cook with or drink water from the hot water tap. Hot water can dissolve lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove or in the microwave.
3. Remove loose lead solder and debris from the plumbing materials installed in newly constructed homes and buildings, or homes and buildings in which the plumbing has recently been replaced, by removing the faucet strainers from all taps and running the water from three to five minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time. Please call the WFF HELP desk at [\(757\) 824-4357](tel:7578244357) to have the strainers cleaned.
4. If you suspect that your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the WFF waterworks at [\(757\) 824-1191](tel:7578241191) and request that the lead solder be replaced with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify the WFF Construction Management Office at [\(757\) 824-1232](tel:7578241232).
5. Determine whether the service line that connects your home or building to the water main is made of lead. If you suspect that the service line that connects your facility to the water main is made of lead, please call the WFF waterworks at [\(757\) 824-1191](tel:7578241191) to verify site conditions. The waterworks can at the same time check to see if your home or building contains lead solder, lead pipes, or pipe fittings that contain lead. The WFF Construction Management Office also maintains records of the materials used in the construction of buildings and the drinking water distribution system. If the service line that connects your building to the water main contributes more than 15 ppb to drinking water, after its comprehensive treatment program is in place, WFF is required to replace the line. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes and must comply with local plumbing codes.
6. Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards. Please call the WFF HELP desk at [\(757\) 824-4357](tel:7578244357) and an electrician will be sent to check and modify the electrical grounding system as necessary.

The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after the WFF waterworks has completed its actions to minimize lead levels, then you may want to take the following additional measures:

1. Use drinking water fountains at WFF that are equipped with filters. It is the intention of the WFF waterworks to have filters on all water fountains at the facility; however some fountains may not have filters. If you suspect that a fountain in your building does not have a filter, call the WFF HELP desk at (757) 824-4357 to have the fountain examined and a filter installed if necessary.
2. Purchase or lease a local treatment device. Local treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap, however all lead reduction claims should be investigated and carbon filters must be changed periodically. Be sure to check the actual performance of a specific local treatment device before and after installing the unit. To have a filter replaced or to check the performance of a local treatment device, call the WFF HELP desk at (757) 824-4357.
3. Purchase bottled water for drinking and cooking.

You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

1. The WFF waterworks at (757) 824-1191 can provide you with information about your community's water supply and a list of local laboratories that have been certified by the Virginia Division of Consolidated Laboratory Services for testing water quality.
2. The WFF Construction Management Office at (757) 824-1232 can provide you with information about building records that should contain the names of plumbing contractors that plumbed your home or building.
3. The following is a list of sources that can provide you with information about the health effects of lead and how you can have your child's blood tested:
  - Medical Director, WFF Health Unit, at (757) 824-1266
  - Environmental Health Supervisor, Accomack County Health Department, at (757) 824-5616
  - Virginia Department of Health Office of Drinking Water, Southeast Virginia Field Office, at (757) 683-2000
  - Lead Safe Virginia Program Director, Virginia Department of Health Division of Child and Adolescent Health, at (877) 668-7987

The following is a list of some State-approved laboratories in your area that you can call to have your water tested for lead:

- James R. Reed and Associates, Newport News, VA, at (757) 873-4703
- Jennings Laboratories, Inc., Virginia Beach, VA, at (757) 425-1498